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TITLE: Field Evaluation of Lethal Ovitrap against Dengue Vectors

PRINCIPAL INVESTIGATOR: Dr. Lane Foil

CONTRACTING ORGANIZATION: Louisiana State University Agricultural Center  
Baton Rouge, LA 70894-5071

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**INTRODUCTION:** Ovitraps have been used to effectively sample dengue mosquito vector populations, particularly *Aedes aegypti* for over a decade. Modifying a standard ovitrap by incorporating an insecticide would result in a lethal ovitrap (LO) that could be used as an inexpensive, environmentally sound dengue vector suppression method. These lethal ovitraps could be integrated into existing control programs, such as community based clean-up campaigns which focus on the reduction on mosquito breeding sites. The objectives of this study were to determine the efficacy of lethal ovitrapping in suppression of dengue mosquito vector populations in Barbados, east Timor and India.

**BODY:** Protocols and coordination with the Pan American Health Organization (PAHO) for Barbados and with the World Health Organization (WHO) for India, were completed in January 2002. A site visit to Barbados to coordinate with the Barbados Ministry of Health (MOH), in collaboration with PAHO and field site selection was done in late January 2003. The Barbados MOH personnel, including the Minister of Health himself agreed to the testing the LO in Barbados and to the protocol provided, which was the approved protocol for this contract. Field equipment (dissecting microscope & back-pack aspirator) along with ovitrap cups and treated strips were sent to Barbados in early March for proposed start date in April. Prior to any pre-treatment sampling the Barbados MOH began to hedge on start date. After several months of trying to negotiate with the MOH through PAHO all attempts to initiate the project in Barbados were stopped. Through PAHO and alternative Caribbean island for field-testing of the LO in 2003 is in progress with start date to coincide with the dengue vector season there.

Coordination with Dr. Das, Director of the Vector Control research Center in India for field-testing of the LO in India were initiated in February 2002. Slight modifications to the protocol sent to Dr. Das were made and an agreed start in July/August 2002 were agreed to by Dr. Perich and Dr. Das, the start of the dengue vector season in southern India. Prior to initiation of this test of the LO in India, US military involvement in Afghanistan and Pakistan interrupted any further work in India. Again in collaboration with WHO an alternative site in this region, Bangladesh with Jahangirnagar University in Dhaka, Bangladesh.

Dr. Perich and LSU AG could do no compelling or analysis of the data from the results of LO testing in East Timor. Center, because no data was provide to them from WRAIR. This was due to fact that the Australian Army, who were to do the testing of the LO in east Timor were unable to do the testing.

#### **KEY RESEARCH ACCOPMLISHMENTS:**

- Protocols were developed and approved for testing the LO in Barbados and India
- Coordination with PAHO for tests in Barbados and with WHO for tests in India were completed.
- Site visit to select field sites for testing the LO in Barbados and coordination with Barbados MOH was done

#### **REPORATABLE OUTCOMES:** None

**CONCLUSIONS:** With the failure to be able to start the LO testing in Barbados, an alternative Caribbean island for testing the LO in 2003, coordinated through PAHO is being done. Alternative site for India, for testing the LO in that region has been initiated with Jahangirnagar University for tests in Bangladesh. Both tests of the LO at the two alternate sites have been discussed with MAJ Brian Gentile, the LO product manager at the U.S Army Medical Material Development Activity (USAMDA) and he is an agreement to the no cost extension and the alternate site testing of the LO.

**EXTENSION ACTIVITY:** Mike Perich died in an automobile accident October 11, 2003. There was no further activity. Lane Foil was named principal investigator as a matter of record. He arranged for the submittal of the final report and the return of funds that had not been expended. He considers this to be the final action necessary.

Lane Foil  
404 Life Sciences Building-LSU  
Baton Rouge, LA 70803  
225-578-1825  
Fax: 225-578-7307  
lfoil@agctr.lsu.edu